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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/612,571	07/07/2000	Hideyuki Makitani	862.C1951	8640
5514	7590	06/29/2005	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			PHAM, THIERRY L	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/612,571	Applicant(s) MAKITANI, HIDEYUKI	
	Examiner Thierry L. Pham	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- This action is responsive to the following communication: an Amendment filed on 3/14/05.
- Claims 1-20 have been canceled; Claims 21-42 are newly added.
- Amendment filed respective to the Title has been received and entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21, 32, 42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not provide an adequate written description of the limitations as recited in claims 21, 32, and 42, wherein “a deciding unit adapted to decide a first data length of a packet to be transferred from said first data communication unit to said second communication unit based upon information related to a second data length of a packet which is receivable by said second data communication unit”; therefore, it does not enable one skilled in the art to make, use and/or practice the invention. The examiner is unable to locate any portions within an original filed specification relating to the newly cited features.

Claim 30 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification does not provide an adequate written description of the limitations as recited in claim 30, wherein “information related to a third data length of a packet”; therefore, it does not

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enable one skilled in the art to make, use and/or practice the invention. The examiner is unable to locate any portions within an original filed specification relating to the newly cited features.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21, 32, and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Limitations as cited in claims 21, 32, and 42 includes "a deciding unit adapted to decide a first data length of a packet to be transferred from said first data communication unit to said second communication unit based upon information related to a second data length of a packet which is receivable by said second data communication unit". The examiner is unclear whether first data length and second data length are transmitted in sequence or not (i.e. transfer first data length then second data length or transfer second data length then first data length). For instant, if transmission is assumed to be transmitted in sequence (i.e. first then second) then it would be impossible to determine whether or not to transmit the first data length because the second data length has not been transmitted to a second communication means and since the first data length is transmitted based upon information from a second data length transmitted from a second communication means. According to the original filed specification, a variable length data is divided into a plurality of fixed-length packets and transmitted from a scanner to a printer via DMA controller for transmission speed purposes. Herein, the examiner interprets "first data length" is the data to be transmitted next after the printer prints the previous transmitted data.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 21-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeoka et al (US 6665082), and in view of Watanabe et al (US 5815283).

Takeoka discloses a data communication system (fig. 1) comprising a first data communication unit (printer controller 10, fig. 1), and a second communication unit (printer 20, fig. 1) communicating with said first data communication unit, said data communication system comprising:

- a deciding unit (main CPU 11 of printer controller 10, fig. 1) adapted to decide a first data length of a packet to be transferred from said first data communication unit to said second data communication unit based upon information related to a second data length of a packet which is receivable by said second data communication unit (CPU 11 of controller 11 determines whether or not to transmit the next packet data based upon results received from printer 20, fig. 10, col. 5, lines 13-21, col. 9, lines 15-30, col. 11, lines 1-15, and cols. 14-15),

- wherein said first communication unit (printer controller 10, fig. 1) comprises:

- a generating unit (CPU 11, fig. 1) adapted to generate a plurality of packets (plurality of packets 10-12) having said first data length;

- a storage unit (main memory 12, fig. 1) adapted to stored the plurality of packets generated by said generating unit.

However, Takeoka does not expressly disclose transferring of data is performed via using DMA transfer.

Watanabe, in the same field of endeavor for image processing system (fig. 1-2), teaches transferring of data is performed using DMA transfer (DMA controller 23, fig. 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify transmission method of Takeoka to include a method for transfer using DMA transfer as per teachings of Watanabe because of a following reason: (1) DMA controller enables/improves high-speed data transferring (col. 7, lines 5-15, Watanabe) between printer controller and printer.

Therefore, it would have been obvious to combine Takeoka with Watanabe to obtain the invention as specified in claim 21.

Regarding claim 22, Takeoka further teaches the system according to claim 21, wherein said generating unit adds to each of the plurality of packets having said first data length, information indicating whether the packet is a final packet (added-on packet information including data end packet information, fig. 3, col. 15, lines 44-50).

Regarding claim 23, Takeoka further teaches the system according to claim 21, wherein said first data length is shorter than said second data length (fig. 8, users/operators manually designated packets size).

Regarding claim 24, Takeoka further teaches the system according to claim 21, wherein said first data length communication unit further comprises a first serial communication controller (serial transfer, col. 1, lines 39-45) for controller serial communication with second communication controller of said second data communication unit, said first serial communication controller converting the packets transferred by said DMA controller to a bit string (bit strings, fig. 21-22) and outputting said bit string to said second serial communication controller.

Regarding claim 25, Takeoka further teaches the system according to claim 21, wherein said first data communication unit receives the information related to the second data length (i.e. transfer request of previous transmitted data, figs. 11-15) of a packet which is receivable by said second data communication unit, from said second data communication unit.

Regarding claim 26, Takeoka further teaches the system according to claim 21, wherein said generating unit generates the plurality of packets of said first data length by dividing data having a predetermined data length (dividing into plurality of packets as shown in fig. 6).

Regarding claim 27, Takeoka further teaches the system according to claim 26, where said predetermined data length is variable (fig. 11, col. 13, lines 1-65).

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Regarding claim 28, Takeoka further teaches the system according to claim 21, wherein said deciding unit decides said first data length in response to initialization (col. 15, lines 50-59, initialization is known in the art prior for transmission of any image data) of said data communication system.

Regarding claim 29, Watanabe further teaches the system according to claim 21, wherein said DMA controller (DMA controller 23, fig. 3) controls DMA transfer of the plurality of packets having said first data length transmitted from said second data communication unit, to said storage unit.

Regarding claim 30, Takeoka further teaches the system according to claim 21, wherein said deciding unit decides the first data length based upon the information related to the second data length of a packet which is receivable by said second data communication unit, and information relates to a third data length (CPU 11 of controller 11 determines whether or not to transmit the next packet data based upon results received from printer 20, fig. 10, col. 5, lines 13-21, col. 9, lines 15-30, col. 11, lines 1-15, and cols. 14-15) of a packet which is transmitted by said first data communication unit.

Regarding claim 31, Takeoka further teaches the system according to claim 21, wherein said first data communication unit further comprises an image input unit for inputting image data (printer controller 10, fig. 1), and said second data communication unit further comprises an image processing unit for processing image data input by said image input unit (printer 20, fig. 1).

Regarding claims 32-41 recite limitations that are similar and in the same scope of invention as included to those in claims 21-31 above; therefore, claims 32-41 are rejected for the same rejection rationale/basis as described in claims 21-31.

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Regarding claim 42: Claim 42 is the methods corresponding the apparatus and recite limitations that are similar and in the same scope of invention as to those in claim 21; therefore, claim 42 are rejected for the same rejection rationale/basis as described in claim 21 above.

Response to Arguments

Applicant's arguments with respect to claims 21-42 have been considered but are moot in view of the new ground(s) of rejection (i.e. different interpretations) using previous cited prior arts of record due to newly added claims 21-42.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

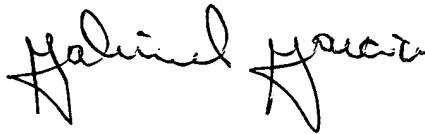
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thierry L. Pham whose telephone number is (571) 272-7439. The examiner can normally be reached on M-F (9:30 AM - 6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (571)272-7437. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thierry L. Pham



**GABRIEL GARCIA
PRIMARY EXAMINER**